



US006428990B1

(12) **United States Patent**
Mukerji et al.

(10) **Patent No.: US 6,428,990 B1**
(45) **Date of Patent: Aug. 6, 2002**

- (54) **HUMAN DESATURASE GENE AND USES THEREOF**
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- (*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/439,261**

(22) Filed: **Nov. 12, 1999**

Related U.S. Application Data

- (63) Continuation-in-part of application No. 09/227,613, filed on Jan. 8, 1999, which is a continuation-in-part of application No. PCT/US98/07422, filed on Apr. 10, 1998, which is a continuation-in-part of application No. 08/833,610, filed on Apr. 11, 1997, now Pat. No. 5,972,664.
- (51) **Int. Cl.**⁷ **C12P 7/64**; C12P 7/62;
C12N 9/02; C12N 1/20; C07H 21/04
- (52) **U.S. Cl.** **435/134**; 435/135; 435/136;
435/189; 435/252.3; 435/320.1; 536/23.2;
530/350
- (58) **Field of Search** 435/189, 252.3,
435/320.1, 134-136; 536/23.2; 530/350

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(57) **ABSTRACT**

The subject invention relates to the identification of a gene involved in the desaturation of polyunsaturated fatty acids at carbon 5 (i.e., "human Δ5-desaturase") and to uses thereof. In particular, human Δ5-desaturase may be utilized, for example, in the conversion of dihomo-γ-linolenic acid (DGLA) to arachidonic acid (AA) and in the conversion of 20:4n-3 to eicosapentaenoic acid (EPA). AA or polyunsaturated fatty acids produced therefrom may be added to pharmaceutical compositions, nutritional compositions, animal feeds, as well as other products such as cosmetics.

6 Claims, 48 Drawing Sheets